



SEQUENCE LISTING

<110> Hawiger, Daniel
Steinman, Ralph
Nussenzweig, Michel

<120> Enhanced Antigen Delivery and Modulation
of the Immune System Therefrom

<130> 600-1-081CONCIP

<140> 09/925,284

<141> 2001-08-09

<150> 09/586,704

<151> 2000-06-05

<150> 08/381,528

<151> 1995-01-31

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<212> PRT
<213> Homo sapiens

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Gly Val Asn Glu Asp Glu Ile Met Leu Pro Ser Phe His Asp
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			20					25					30		
Asn	Asp	Pro	Phe	Thr	Ile	Val	His	Glu	Asn	Thr	Gly	Lys	Cys	Ile	Gln
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Pro	Leu	Ser	Asp	Trp	Val	Val	Ala	Gln	Asp	Cys	Ser	Gly	Thr	Asn	Asn
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Met	Leu	Trp	Lys	Trp	Val	Ser	Gln	His	Arg	Leu	Phe	His	Leu	Glu	Ser
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Gln	Lys	Cys	Leu	Gly	Leu	Asp	Ile	Thr	Lys	Ala	Thr	Asp	Asn	Leu	Arg
			85						90					95	
Met	Phe	Ser	Cys	Asp	Ser	Thr	Val	Met	Leu	Trp	Trp	Lys	Cys	Glu	His
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His	Ser	Leu	Tyr	Thr	Ala	Ala	Gln	Tyr	Arg	Leu	Ala	Leu	Lys	Asp	Gly
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Tyr	Ala	Val	Ala	Asn	Thr	Asn	Thr	Ser	Asp	Val	Trp	Lys	Lys	Gly	Gly
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Ser	Glu	Glu	Asn	Leu	Cys	Ala	Gln	Pro	Tyr	His	Glu	Ile	Tyr	Thr	Arg
145					150					155					160
Asp	Gly	Asn	Ser	Tyr	Gly	Arg	Pro	Cys	Glu	Phe	Pro	Phe	Leu	Ile	Gly
				165					170					175	

Glu	Thr	Trp	Tyr	His	Asp	Cys	Ile	His	Asp	Glu	Asp	His	Ser	Gly	Pro	
			180					185					190			
Trp	Cys	Ala	Thr	Thr	Leu	Ser	Tyr	Glu	Tyr	Asp	Gln	Lys	Trp	Gly	Ile	
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Cys	Leu	Leu	Pro	Glu	Ser	Gly	Cys	Glu	Gly	Asn	Trp	Glu	Lys	Asn	Glu	
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Gln	Ile	Gly	Ser	Cys	Tyr	Gln	Phe	Asn	Asn	Gln	Glu	Ile	Leu	Ser	Trp	
225					230					235					240	
Lys	Glu	Ala	Tyr	Val	Ser	Cys	Gln	Asn	Gln	Gly	Ala	Asp	Leu	Leu	Ser	
				245					250					255		
Ile	His	Ser	Ala	Ala	Glu	Leu	Ala	Tyr	Ile	Thr	Gly	Lys	Glu	Asp	Ile	
			260					265					270			
Ala	Arg	Leu	Val	Trp	Leu	Gly	Leu	Asn	Gln	Leu	Tyr	Ser	Ala	Arg	Gly	
		275					280					285				
Trp	Glu	Trp	Ser	Asp	Phe	Arg	Pro	Leu	Lys	Phe	Leu	Asn	Trp	Asp	Pro	
	290					295					300					
Gly	Thr	Pro	Val	Ala	Pro	Val	Ile	Gly	Gly	Ser	Ser	Cys	Ala	Arg	Met	
305					310					315					320	
Asp	Thr	Glu	Ser	Gly	Leu	Trp	Gln	Ser	Val	Ser	Cys	Glu	Ser	Gln	Gln	
				325					330					335		
Pro	Tyr	Val	Cys	Lys	Lys	Pro	Leu	Asn	Asn	Thr	Leu	Glu	Leu	Pro	Asp	
			340					345					350			
Val	Trp	Thr	Tyr	Thr	Asp	Thr	His	Cys	His	Val	Gly	Trp	Leu	Pro	Asn	
		355					360					365				
Asn	Gly	Phe	Cys	Tyr	Leu	Leu	Ala	Asn	Glu	Ser	Ser	Ser	Trp	Asp	Ala	
	370					375					380					
Ala	His	Leu	Lys	Cys	Lys	Ala	Phe	Gly	Ala	Asp	Leu	Ile	Ser	Met	His	
385					390					395					400	
Ser	Leu	Ala	Asp	Val	Glu	Val	Val	Val	Thr	Lys	Leu	His	Asn	Gly	Asp	
			405						410					415		
Val	Lys	Lys	Glu	Ile	Trp	Thr	Gly	Leu	Lys	Asn	Thr	Asn	Ser	Pro	Ala	
			420					425					430			
Leu	Phe	Gln	Trp	Ser	Asp	Gly	Thr	Glu	Val	Thr	Leu	Thr	Tyr	Trp	Asn	
		435					440					445				
Glu	Asn	Glu	Pro	Ser	Val	Pro	Phe	Asn	Lys	Thr	Pro	Asn	Cys	Val	Ser	
	450					455					460					
Tyr	Leu	Gly	Lys	Leu	Gly	Gln	Trp	Lys	Val	Gln	Ser	Cys	Glu	Lys	Lys	
465					470					475					480	
Leu	Arg	Tyr	Val	Cys	Lys	Lys	Lys	Gly	Glu	Ile	Thr	Lys	Asp	Ala	Glu	
			485						490					495		
Ser	Asp	Lys	Leu	Cys	Pro	Pro	Asp	Glu	Gly	Trp	Lys	Arg	His	Gly	Glu	
			500					505					510			
Thr	Cys	Tyr	Lys	Ile	Tyr	Glu	Lys	Glu	Ala	Pro	Phe	Gly	Thr	Asn	Cys	
		515					520					525				
Asn	Leu	Thr	Ile	Thr	Ser	Arg	Phe	Glu	Gln	Glu	Phe	Leu	Asn	Tyr	Met	
	530					535					540					
Met	Lys	Asn	Tyr	Asp	Lys	Ser	Leu	Arg	Lys	Tyr	Phe	Trp	Thr	Gly	Leu	
545					550					555					560	
Arg	Asp	Pro	Asp	Ser	Arg	Gly	Glu	Tyr	Ser	Trp	Ala	Val	Ala	Gln	Gly	
				565					570					575		
Val	Lys	Gln	Ala	Val	Thr	Phe	Ser	Asn	Trp	Asn	Phe	Leu	Glu	Pro	Ala	
			580					585					590			
Ser	Pro	Gly	Gly	Cys	Val	Ala	Met	Ser	Thr	Gly	Lys	Thr	Leu	Gly	Lys	
		595					600					605				
Trp	Glu	Val	Lys	Asn	Cys	Arg	Ser	Phe	Arg	Ala	Leu	Ser	Ile	Cys	Lys	
	610					615					620					
Lys	Val	Ser	Glu	Pro	Gln	Glu	Pro	Glu	Glu	Ala	Ala	Pro	Lys	Pro	Asp	

625					630					635				640	
Asp	Pro	Cys	Pro	Glu	Gly	Trp	His	Thr	Phe	Pro	Ser	Ser	Leu	Ser	Cys
				645					650					655	
Tyr	Lys	Val	Phe	His	Ile	Glu	Arg	Ile	Val	Arg	Lys	Arg	Asn	Trp	Glu
			660					665					670		
Glu	Ala	Glu	Arg	Phe	Cys	Gln	Ala	Leu	Gly	Ala	His	Leu	Pro	Ser	Phe
		675				680					685				
Ser	Arg	Arg	Glu	Glu	Ile	Lys	Asp	Phe	Val	His	Leu	Leu	Lys	Asp	Gln
	690					695				700					
Phe	Ser	Gly	Gln	Arg	Trp	Leu	Trp	Ile	Gly	Leu	Asn	Lys	Arg	Ser	Pro
705					710					715					720
Asp	Leu	Gln	Gly	Ser	Trp	Gln	Trp	Ser	Asp	Arg	Thr	Pro	Val	Ser	Ala
				725					730					735	
Val	Met	Met	Glu	Pro	Glu	Phe	Gln	Gln	Asp	Phe	Asp	Ile	Arg	Asp	Cys
			740					745					750		
Ala	Ala	Ile	Lys	Val	Leu	Asp	Val	Pro	Trp	Arg	Arg	Val	Trp	His	Leu
		755					760					765			
Tyr	Glu	Asp	Lys	Asp	Tyr	Ala	Tyr	Trp	Lys	Pro	Phe	Ala	Cys	Asp	Ala
	770					775					780				
Lys	Leu	Glu	Trp	Val	Cys	Gln	Ile	Pro	Lys	Gly	Ser	Thr	Pro	Gln	Met
785					790					795					800
Pro	Asp	Trp	Tyr	Asn	Pro	Glu	Arg	Thr	Gly	Ile	His	Gly	Pro	Pro	Val
				805					810					815	
Ile	Ile	Glu	Gly	Ser	Glu	Tyr	Trp	Phe	Val	Ala	Asp	Pro	His	Leu	Asn
			820					825					830		
Tyr	Glu	Glu	Ala	Val	Leu	Tyr	Cys	Ala	Ser	Asn	His	Ser	Phe	Leu	Ala
		835					840					845			
Thr	Ile	Thr	Ser	Phe	Thr	Gly	Leu	Lys	Ala	Ile	Lys	Asn	Lys	Leu	Ala
	850					855					860				
Asn	Ile	Ser	Gly	Glu	Glu	Gln	Lys	Trp	Trp	Val	Lys	Thr	Ser	Glu	Asn
865					870					875					880
Pro	Ile	Asp	Arg	Tyr	Phe	Leu	Gly	Ser	Arg	Arg	Arg	Leu	Trp	His	His
				885					890					895	
Phe	Pro	Met	Thr	Phe	Gly	Asp	Glu	Cys	Leu	His	Met	Ser	Ala	Lys	Thr
			900					905					910		
Trp	Leu	Val	Asp	Leu	Ser	Lys	Arg	Ala	Asp	Cys	Asn	Ala	Lys	Leu	Pro
		915					920					925			
Phe	Ile	Cys	Glu	Arg	Tyr	Asn	Val	Ser	Ser	Leu	Glu	Lys	Tyr	Ser	Pro
	930					935					940				
Asp	Pro	Ala	Ala	Lys	Val	Gln	Cys	Thr	Glu	Lys	Trp	Ile	Pro	Phe	Gln
945					950					955					960
Asn	Lys	Cys	Phe	Leu	Lys	Val	Asn	Ser	Gly	Pro	Val	Thr	Phe	Ser	Gln
			965						970					975	
Ala	Ser	Gly	Ile	Cys	His	Ser	Tyr	Gly	Gly	Thr	Leu	Pro	Ser	Val	Leu
		980						985					990		
Ser	Arg	Gly	Glu	Gln	Asp	Phe	Ile	Ile	Ser	Leu	Leu	Pro	Glu	Met	Glu
		995					1000					1005			
Ala	Ser	Leu	Trp	Ile	Gly	Leu	Arg	Trp	Thr	Ala	Tyr	Glu	Arg	Ile	Asn
	1010					1015					1020				
Arg	Trp	Thr	Asp	Asn	Arg	Glu	Leu	Thr	Tyr	Ser	Asn	Phe	His	Pro	Leu
1025				1030						1035					1040
Leu	Val	Gly	Arg	Arg	Leu	Ser	Ile	Pro	Thr	Asn	Phe	Phe	Asp	Asp	Glu
			1045						1050					1055	
Ser	His	Phe	His	Cys	Ala	Leu	Ile	Leu	Asn	Leu	Lys	Lys	Ser	Pro	Leu
		1060						1065					1070		
Thr	Gly	Thr	Trp	Asn	Phe	Thr	Ser	Cys	Ser	Glu	Arg	His	Ser	Leu	Ser
		1075					1080					1085			

Leu Cys Gln Lys Tyr Ser Glu Thr Glu Asp Gly Gln Pro Trp Glu Asn
 1090 1095 1100
 Thr Ser Lys Thr Val Lys Tyr Leu Asn Asn Leu Tyr Lys Ile Ile Ser
 1105 1110 1115 1120
 Lys Pro Leu Thr Trp His Gly Ala Leu Lys Glu Cys Met Lys Glu Lys
 1125 1130 1135
 Met Arg Leu Val Ser Ile Thr Asp Pro Tyr Gln Gln Ala Phe Leu Ala
 1140 1145 1150
 Val Gln Ala Thr Leu Arg Asn Ser Ser Phe Trp Ile Gly Leu Ser Ser
 1155 1160 1165
 Gln Asp Asp Glu Leu Asn Phe Gly Trp Ser Asp Gly Lys Arg Leu Gln
 1170 1175 1180
 Phe Ser Asn Trp Ala Gly Ser Asn Glu Gln Leu Asp Asp Cys Val Ile
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 Leu Asp Thr Asp Gly Phe Trp Lys Thr Ala Asp Cys Asp Asp Asn Gln
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 Pro Gly Ala Ile Cys Tyr Tyr Pro Gly Asn Glu Thr Glu Glu Glu Val
 1220 1225 1230
 Arg Ala Leu Asp Thr Ala Lys Cys Pro Ser Pro Val Gln Ser Thr Pro
 1235 1240 1245
 Trp Ile Pro Phe Gln Asn Ser Cys Tyr Asn Phe Met Ile Thr Asn Asn
 1250 1255 1260
 Arg His Lys Thr Val Thr Pro Glu Glu Val Gln Ser Thr Cys Glu Lys
 1265 1270 1275 1280
 Leu His Pro Lys Ala His Ser Leu Ser Ile Arg Asn Glu Glu Glu Asn
 1285 1290 1295
 Thr Phe Val Val Glu Gln Leu Leu Tyr Phe Asn Tyr Ile Ala Ser Trp
 1300 1305 1310
 Val Met Leu Gly Ile Thr Tyr Glu Asn Asn Ser Leu Met Trp Phe Asp
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 Lys Thr Ala Leu Ser Tyr Thr His Trp Arg Thr Gly Arg Pro Thr Val
 1330 1335 1340
 Lys Asn Gly Lys Phe Leu Ala Gly Leu Ser Thr Asp Gly Phe Trp Asp
 1345 1350 1355 1360
 Ile Gln Ser Phe Asn Val Ile Glu Glu Thr Leu His Phe Tyr Gln His
 1365 1370 1375
 Ser Ile Ser Ala Cys Lys Ile Glu Met Val Asp Tyr Glu Asp Lys His
 1380 1385 1390
 Asn Gly Thr Leu Pro Gln Phe Ile Pro Tyr Lys Asp Gly Val Tyr Ser
 1395 1400 1405
 Val Ile Gln Lys Lys Val Thr Trp Tyr Glu Ala Leu Asn Ala Cys Ser
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 Gln Ser Gly Gly Glu Leu Ala Ser Val His Asn Pro Asn Gly Lys Leu
 1425 1430 1435 1440
 Phe Leu Glu Asp Ile Val Asn Arg Asp Gly Phe Pro Leu Trp Val Gly
 1445 1450 1455
 Leu Ser Ser His Asp Gly Ser Glu Ser Ser Phe Glu Trp Ser Asp Gly
 1460 1465 1470
 Arg Ala Phe Asp Tyr Val Pro Trp Gln Ser Leu Gln Ser Pro Gly Asp
 1475 1480 1485
 Cys Val Val Leu Tyr Pro Lys Gly Ile Trp Arg Arg Glu Lys Cys Leu
 1490 1495 1500
 Ser Val Lys Asp Gly Ala Ile Cys Tyr Lys Pro Thr Lys Asp Lys Lys
 1505 1510 1515 1520
 Leu Ile Phe His Val Lys Ser Ser Lys Cys Pro Val Ala Lys Arg Asp
 1525 1530 1535
 Gly Pro Gln Trp Val Gln Tyr Gly Gly His Cys Tyr Ala Ser Asp Gln

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His	Ser	Ala	Thr	Val	Val	Thr	Ile	Ala	Asp	Glu	Asn	Glu	Asn	Lys	Phe	
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Val	Ser	Arg	Leu	Met	Arg	Glu	Asn	Tyr	Asn	Ile	Thr	Met	Arg	Val	Trp	
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Leu	Gly	Leu	Ser	Gln	His	Ser	Leu	Asp	Gln	Ser	Trp	Ser	Trp	Leu	Asp	
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Gly	Leu	Asp	Val	Thr	Phe	Val	Lys	Trp	Glu	Asn	Lys	Thr	Lys	Asp	Gly	
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Asp	Gly	Lys	Cys	Ser	Ile	Leu	Ile	Ala	Ser	Asn	Glu	Thr	Trp	Arg	Lys	
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Val	His	Cys	Ser	Arg	Gly	Tyr	Ala	Arg	Ala	Val	Cys	Lys	Ile	Pro	Leu	
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Ser	Pro	Asp	Tyr	Thr	Gly	Ile	Ala	Ile	Leu	Phe	Ala	Val	Leu	Cys	Leu	
1665						1670				1675						1680
Leu	Gly	Leu	Ile	Ser	Leu	Ala	Ile	Trp	Phe	Leu	Leu	Gln	Arg	Ser	His	
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Ile	Arg	Trp	Thr	Gly	Phe	Ser	Ser	Val	Arg	Tyr	Glu	His	Gly	Thr	Asn	
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Glu	Asp	Glu	Val	Met	Leu	Pro	Ser	Phe	His	Asp						
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